

Notice of Allowability

Application No.

10/655,906

Examiner

Dung Lam

Applicant(s)

KOBYLINSKI ET AL.

Art Unit

2687

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/6/05.
2. ☒ The allowed claim(s) is/are 1-5 and 7-15.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

Allowable Subject Matter

1. Claims 1-5,7-15 are allowed.

The examiner's reason for allowance is based on the applicant's Remarks and the Terminal Disclaimer.

2. Regarding independent **claim 1**, the present invention teaches a method for mobile assisted handoff of a communication link between a mobile station and a base station in a digital cellular communications network, from a current base station to one of a number of candidate base stations within said network, said method comprising the steps of:

generating a list of a plurality of candidate channels for possible acceptance of said communication handoff;

transmitting a first measurement order from said current base station to said mobile station, said first measurement order containing said list of candidate channels;

measuring a received signal strength and a bit error rate at said mobile station for said communication between said mobile station and said current base station;

measuring received signal strength at said mobile station for each of said candidate channels listed in said first measurement order;

transmitting said received signal strength measurements from said mobile station to said current base station;

selecting a plurality of most favorable candidate channels from said received signal strength measurement results;

transmitting a second measurement order from said current base station to said mobile station, said second measurement order containing a list of said most favorable candidate channels;

tuning and synchronizing said mobile station to each of said candidate channels listed in said second measurement order, the step of tuning and synchronizing including: tuning into said candidate channel, reading data within time window on said candidate channel;

correlating said data from said candidate channel with a plurality of known synchronization words and identifying a most probable synchronization word within said data; and returning back to said current base station channel;

reading and decoding an identification code for each of said candidate channels, wherein said identification code comprises a digital voice color code in each of said candidate

Art Unit: 2687

channels, said step of reading and decoding including: transmitting said identification codes for each of said candidate channels from said mobile station to said current base station;

and correlating said received signal strength measurements with said identification codes to identify an optimal candidate base station for effecting said handoff of said communication.

3. Regarding independent **claim 8**, the present invention teaches an improved digital cellular communication system, the improvement comprising mobile station and base station elements for identifying candidate base stations for a communication handoff, making signal strength measurements on said candidate base stations, and selecting one of said candidate base stations to receive said communication handoff, said improved system comprising:

a current base station, said current base station being in communication on a current channel with a mobile station, said current base station having a memory for storing a first list of candidate base stations, said candidate base stations being those base stations proximate to said current base station and to which said communication handoff could occur;

a plurality of candidate base stations transmitting on a plurality of candidate channels, said transmissions containing synchronization and identification data;

a mobile station in communication with said current base station, said mobile station comprising:

means for making received signal strength measurements on said current channel and on said candidate channels;

means for tuning to said candidate channels and returning to said current channel;

means for synchronizing to said candidate channels including a data processing device and a memory device, said data processing device for locating and decoding said identification data on said candidate channel and said memory device for storing said identification data, said data processing device and said memory device located on said mobile station, said data processing device able to perform at least at a

Art Unit: 2687

rate of a predetermined number of operations per measurement period and said memory device having at least a predetermined number of bits of memory;

means for reading said identification data on said candidate channels;

wherein said identification code comprises a digital voice color code in each of said candidate channels; and

means for correlating said received signal strength measurements with said identification data and identifying from said correlation an optimal candidate base station to receive said communication handoff.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Lam whose telephone number is (571) 272-6497.

The examiner can normally be reached on M - F 9-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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SONNY TRINH
PRIMARY EXAMINER